

Notice of Allowability

Application No.

10/736,930

Examiner

David D. Le

Applicant(s)

SAMIE ET AL.

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 20 September 2006.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other Corrected Drawings.

DETAILED ACTION

1. This is the fourth Office action on the merits of Application No. 10736,930, filed 16 December 2003. Claims 1-20 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:
 - Information Disclosure Statement, received on 12/16/03

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with applicants' attorney, Christopher W. Quinn, on 22 November 2006.

The application has been amended as follows:

Specification:

- Paragraph [0028], line 2, "mechanical diode 58" has been amended as --selectable braking one-way clutch 58--;
- Paragraph [0028], line 2, "mechanical diode 58" has been amended as --selectable braking one-way clutch 58--;

- Paragraph [0037], line 3, “diode (selectable braking one-way clutch) 58” has been amended as --selectable braking one-way clutch 58--;
- Paragraph [0037], line 4, “diode 58” has been amended as --selectable braking one-way clutch 58--;
- Paragraph [0037], line 5, “diode 58” has been amended as --selectable braking one-way clutch 58--;
- Paragraph [0037], line 6, “diode 58” has been amended as --selectable braking one-way clutch 58--;
- Paragraph [0038], line 1, “The diode 58 is a selectable braking one-way clutch, which may be a” has been amended as --The selectable braking one-way clutch may be a--;
- Paragraph [0039], line 2, “transmission 14 incorporating the mechanical diode 58. This mechanical diode 58 may” has been amended as --transmission 14 incorporating the selectable braking one-way clutch 58. This selectable braking one-way clutch 58 may--;
- Paragraph [0043], line 2, “diode 58” has been amended as --selectable braking one-way clutch 58--;
- Paragraph [0043], line 4, “mechanical diode” has been amended as --selectable braking one-way clutch--;
- Paragraph [0043], line 5, “mechanical diode 58” has been amended as --selectable braking one-way clutch 58--;

Art Unit: 3681

- Paragraph [0043], line 8, “mechanical diode” has been amended as --selectable braking one-way clutch--;
- Paragraph [0043], line 9, “when the diode is unloaded. Because the diode 58 is connected to” has been amended as --when the selectable braking one-way clutch is unloaded. Because the selectable braking one-way clutch is connected to--; and
- Paragraph [0043], line 10, “diode 58 is connected to” has been amended as --selectable braking one-way clutch 58--.

Claims:

- Claim 1, lines 8-9, “in one of reverse and first speed” has been amended as --in reverse and first speeds--;
- Claim 12, lines 8-9, “in one of reverse and first speed” has been amended as --in reverse and first speeds--;
- Claim 12, lines 10-13, “wherein said selectable braking one-way clutch is configured to freewheel in one rotational direction and to brake in an opposite rotational direction, and is selectably reversible to brake in said one rotational direction and freewheel in said opposite rotational direction, thereby facilitating use in said reverse and forward speeds.” has been replaced with --wherein said selectable braking one-way clutch is configured to freewheel in one rotational direction and to brake in an opposite rotational direction, and is selectably reversible to brake in said

Art Unit: 3681

one rotational direction and freewheel in said opposite rotational direction, thereby facilitating use in said reverse and first speeds; and wherein the transmission is characterized by the absence of a torque converter.--;

- Claim 13, lines 9-12, “wherein said second rotating input clutch is slipped for launching the vehicle in reverse; and wherein the transmission is characterized by the absence of a torque converter.” has been replaced with --wherein said second rotating input clutch is slipped for launching the vehicle in reverse.--; and
- Claim 20, lines 8-9, “in one of reverse and first speed” has been amended as --in reverse and first speeds--.

Drawings:

- The following changes to the drawings have been approved by the examiner and agreed upon by applicant:
 - FIG.2, “MECHANICAL DIODE (58)” has been amended as --
SELECTABLE BRAKING ONE-WAY CLUTCH (58)--.

In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes. See attached FIG.2.

Allowable Subject Matter

4. Claims 1-20 are allowed.

5. The following is an examiner's statement of reasons for allowance:

Claim 1:

The prior art of record fails to show or render obvious a multi-speed transmission for a vehicle comprising an input shaft, an output shaft, a plurality of planetary gear sets, a selectable braking one-way clutch, a first rotating input clutch, and a second rotating input clutch, as recited in the claim; specifically, wherein the selectable braking one-way clutch, as interpreted in light of paragraphs [0008] and [0009] of the present specification, brakes rotation of one of the members of the planetary gear sets, which is directly connected with the input shaft, when the transmission is in reverse and first speeds, and the transmission is characterized by the absence of a torque converter.

Claim 12:

The prior art of record fails to show or render obvious a multi-speed transmission for a vehicle comprising an input shaft, an output shaft, a plurality of planetary gear sets, and a selectable reversible braking one-way clutch, as recited in the claim; specifically, wherein the selectable reversible braking one-way clutch is configured to freewheel in one rotational direction and to brake in an opposite rotational direction, and is selectably reversible to brake in the one rotational direction and freewheel in the opposite rotational direction, thereby facilitating the braking of rotation of one of the members of the planetary gear sets when the transmission is in reverse and first speeds.

Claim 20:

The prior art of record fails to show or render obvious a multi-speed transmission for a vehicle comprising an input shaft, an output shaft, a plurality of planetary gear sets, a selectable braking one-way clutch, a first rotating input clutch, a second rotating input clutch, a third clutch, and a brake, as recited in the claim; specifically, wherein the selectable braking one-way clutch, as interpreted in light of paragraphs [0008] and [0009] of the present specification, brakes rotation of one of the members of the planetary gear sets, which is directly connected with the input shaft, when the transmission is in reverse and first speeds; the first, second and third clutches, the brake and the selectable braking one-way clutch are engageable in combination of two to provide six forward speed ratios and one reverse speed ratio between the input shaft and the output shaft; and the transmission is characterized by the absence of a torque converter.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0700-1530).

Art Unit: 3681

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

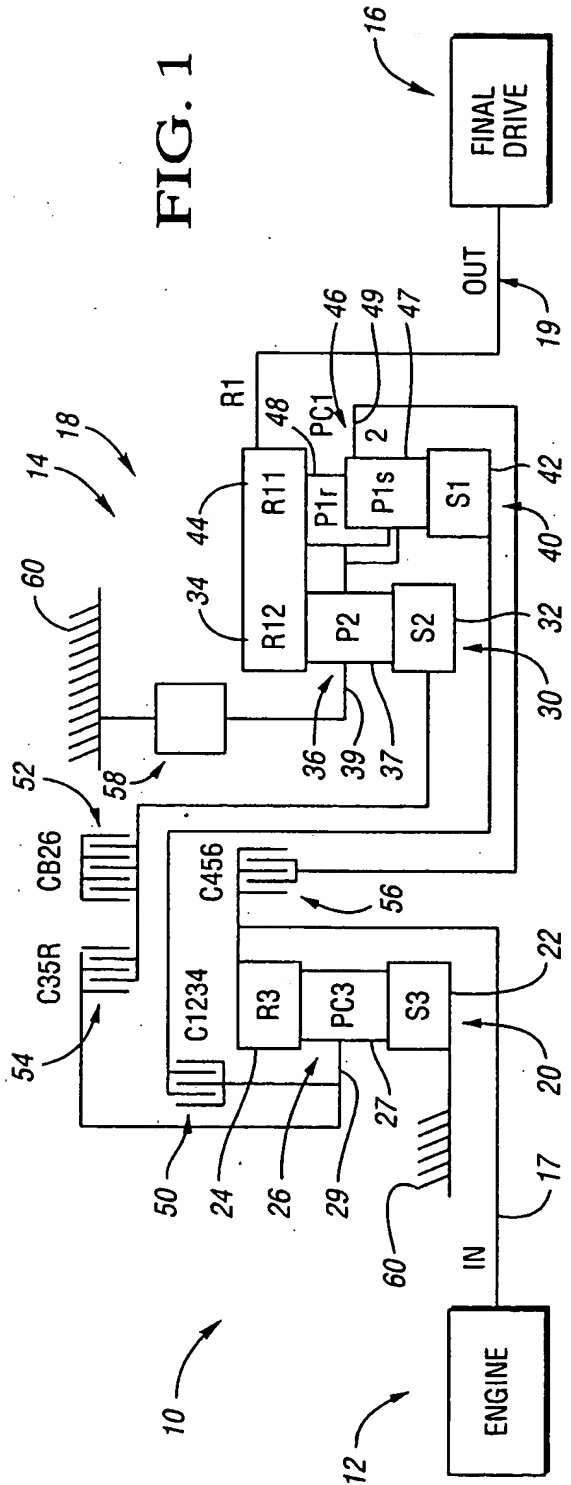
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'D. Le', is written over a horizontal line that extends to the right.

David D. Le
Examiner
Art Unit 3681
11/26/06

ddl

Approved
11/26/06



GEAR STATE	GEAR RATIO	RATIO STEP	C1234 CLUTCH (50)	CB26 CLUTCH (52)	C35R CLUTCH (54)	C456 CLUTCH (56)	SELECTABLE BRAVING ONE-WAY CLUTCH (58)
REV	3.20				X		X
N	--	0.79					0
1st	4.06		X				X
2nd	2.37	1.71	X	X			
3rd	1.55	1.53	X		X		
4th	1.16	1.34	X			X	
5th	0.85	1.36			X	X	
6th	0.67	1.27		X		X	
OVERALL RATIO:		6.03					

FIG. 2